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VENEREAL DISEASES IN THE ARMED FORCES OVERSEAS (1)*

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This is an opportunity, perhaps belated, to recount my experiences whilst serving as Adviser (and later Consultant) in Venereal Diseases to the Middle East Forces and then to the Central Mediterranean Forces. In May 1940, when I was distinctly bored with an army life at Woolwich which meant about three hours' work a day, an unexpected order came that I was to prepare for service in the Middle East as "Adviser in Venereology". My preparation consisted mainly of over two months' idleness in a tent on Aintree racecourse—but such is the way of the Army !

The long sea voyage was broken by three days in Capetown, and no praise is too high for the kindness and hospitality of the people of South Africa. At last, after many more weeks of heat and boredom, we reached Suez, where commenced a long and intimate acquaintance, not always pleasant, with Egyptian railways. I vaguely remember that a journey which normally takes three hours by road occupied over seven hours in stifling heat and ended in the dark, on an empty railway siding, miles outside Cairo. Even the longest journey, however, has an end, and in our hotel the same night we decided, after a bath and a very long iced drink, that the life was not going to be too bad.

This was the first and longest of many journeys—some very pleasant, others

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exhausting and exasperating—and all types of conveyance were used : airplanes, motor cars, railways, hospital ships and hospital trains, a river steamer, a cruiser, jeeps and trucks, ambulances ; even my bicycle was used and on one occasion I narrowly escaped a journey by camel. Many are the memories evoked : the absolute quiet of the moonlit desert ; the stench and heat and noise of Baghdad ; the beauty of Teheran ; the heavy perfume of the Palestinian orange groves ; the historical miracle of Jerusalem ; the incredible beauty of spring flowers in the Jordan valley ; the bazaars of Damascus and Aleppo ; the beat of drums at night in Khartoum at the feast of the Prophet ; trout fishing on the slopes of Mount Kenya ; Pretoria smothered in jacaranda blossom ; the beauty of Capetown seen from Table Mountain ; Vesuvius in eruption ; Rome ; Florence. All these, and a thousand more, were worth the fatigue and frustration, the heat and smells and flies. Another treasure house of memories is full of recollections of colleagues and friends ; into those four-and-a-half years was packed a lifetime of experiences. With this introduction I must end the traveller's tale and proceed with the subject : venereal diseases overseas, as seen in the Middle East Forces from September 1940 to February 1944, and in the Central Mediterranean Forces from February 1944 to March 1945.

THE MIDDLE EAST FORCES

In the Middle East Forces the incidence of venereal disease was recorded on a reliable basis except in the earliest period before administrative machinery was organized. The rate was high at first—about 60 per 1,000 per annum—and was particularly high in certain areas, for example, the Soudan, Greece and Cyprus, where rates of 100 per 1,000 per annum were reached. The incidence in Egypt seldom exceeded 50 per 1,000 per annum, but it depended largely upon such factors as the amount of venereal disease imported (as, for example, when a large convoy of Indian troops arrived) and the amount of leave given. In 1942 and 1943 the incidence in all troops fell to about 30 per 1,000 per annum and, if British and Imperial troops alone are considered, a rate of 18 per 1,000 was achieved. The incidence of venereal diseases in the Middle East Forces was reduced gradually by means of education, propaganda and provision of prophylactic treatment and appliances. The greatest reduction followed the adoption of a policy which placed all brothels out of bounds to troops.

The figures given represent very large numbers of admissions to hospital. It may be disclosed now that the Middle East Forces at one time comprised almost a million men, and that they were a very cosmopolitan collection. One specialist calculated that we had almost "57 different varieties", and it was quite common to have men of at least six different races in hospital simultaneously.

The incidence of venereal disease was very high in Indian troops in 1941-1942. This was made the object of special study, and Colonel Happer, I.M.S., came to Cairo from Iraq to assist in solving the problem. The incidence was gradually reduced and, in the latter part of the campaign, the Indian troops had a very satisfactory record.

Cypriot troops were always a problem. It is often said that the first sign of puberty in a Cypriot is an attack of gonorrhoea, but, whether this be true or not, certainly a very large proportion of Cypriot soldiers reported a chronic urethral discharge, especially if the disclosure of this secured admission to hospital, good rations and freedom from work for an indefinite period. Eventually, a working rule had to be made that in the absence of gonococci a Cypriot did not receive any treatment for urethritis. In their own island, it was a waste of time treating Cypriot soldiers for urethritis other than gonococcal, because they were reinfected so often. They also induced urethritis by application of various irritants.

Classification of diseases

The rate of incidence of syphilis at first was low, but showed a considerable rise between 1941 and 1944. The proportion of syphilis in all admissions to hospital for venereal diseases is indicated in Table 1.

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Very noteworthy were (1) the rise in incidence of syphilis, (2) the prevalence of soft core (chancroid), this being the commonest form of venereal infection, (3) the very low incidence of lymphogranuloma inguinale, (4) the prevalence of non-specific urethritis, often amounting to 35 per cent of all admissions to hospital for venereal diseases.

TABLE I. RELATIVE INCIDENCE OF VENEREAL DISEASES TO ALL ADMISSIONS

Year	Period	Syphilis	Gonorrhoea	Chancroid
1940	Last quarter	7.7	27	31
1941	1st quarter	6.8	35.9	21.4
	2nd "	8.9	29.0	34.3
	3rd "			
	4th "	14.4	23.8	34.1
1942	1st quarter	20.5	31.7	40.2
	2nd "	17.21	25.7	31.8
	3rd "	14.2	29.7	33.8
	4th "	16.4	32.7	44.7
1943	1st quarter	17.6	37.5	38.9
	2nd "	18.4	40.5	32.9
	3rd "	18.4	31.0	44.1
	4th "	15.8	16.7	34.7

Type of syphilis

The great majority of cases of syphilis were in the early primary stage and relatively few secondary eruptions were seen, whereas late syphilis was almost a rarity. Occasionally a gumma was seen or a case of neurosyphilis occurred, but most of these cases had been excluded very successfully before the troops arrived in the theatre of war. Latent syphilis was especially common in native soldiers, particularly in the South African, Soudanese and East African coloured troops. It was not uncommon to find over 30 per cent of these soldiers with a positive Kahn reaction. The significance of this finding is discussed below, but it produced many practical difficulties, especially when there was a great shortage of doctors, hospitals and drugs. As was remarked by an experienced South African medical administrator: "We do not have the doctors, the drugs or the time to purify the blood of the black races."

In Soudanese troops syphilis often assumed a framboesiform type, and very large condylomata might be seen. Very little was seen of *bejel*, the familial type of syphilis found in nomadic Arab tribes, especially in Transjordan.

An unusual difficulty arose in the case of a New Zealand soldier who was found to have strongly positive Kahn and Wassermann reactions. His history was that he had been brought up as a child in the South Sea Islands, playing with native children in an area where yaws was endemic, and he had probably contracted yaws. Scars on his feet and legs were suggestive of this condition.

Leprosy and smallpox were other diseases which had to be considered in differential diagnosis quite often.

Treatment of syphilis

This was very difficult, as it was impossible to retain fully trained soldiers in the base area; in the forward areas, especially in the desert, distances were so vast that the patient could not travel to a medical unit, and the Regimental Medical Officer had very little equipment for intravenous injections. Many doctors continued to give injections to their men; other patients had to travel, when possible, to the nearest Casualty Clearing Station or Field Ambulance; others failed to receive treatment for prolonged periods. The military situation before the Battle of Alamein was such that no man who could fight could be spared from the battle line.

A trial was made of the intensive five-day treatment with Mapharside in over 90 selected cases. This has been reported on by Major Lydon, who did most of

the work. The incidence of toxic effects, especially encephalopathy, was so great that this treatment was abandoned. One patient died and others had severe signs of encephalopathy (one hemiparesis and one bulbar syndrome); several others were believed to suffer from prodromal signs or minor degrees of this complication. Another patient had extremely severe jaundice, commencing whilst he was still in hospital, and he recovered very slowly. One patient was reported to have died two months later from acute liver necrosis, possibly unassociated with his previous treatment.

Acute encephalopathy (haemorrhagic encephalitis).—There were 4 cases in this series. One patient died and the others made a complete recovery and returned to duty. In view of the rarity of this encephalopathy, a fuller clinical description may be given here. The cases were of two types: the anxious, apprehensive and restless type (2 cases) and the dull, torpid and stuporous type (2 cases). The onset of symptoms was rapid and there were no warnings or indications in the previous examinations of the patients. The encephalopathy developed on the fourth or fifth day of treatment. The value of cerebrospinal fluid changes, as an indication of impending disaster, is mentioned below. The first type of patient was apprehensive and restless, but had little or no headache and no vomiting and slept badly. The pupils were dilated but reacted well to light and on convergence. The deep reflexes were absent or very sluggish. The abdominal reflexes were variable. The plantar reflexes were flexor. There was not any incontinence. The fatal case was in this group.

Case 1.—The patient had severe convulsions about 40 hours after the onset of symptoms and died very soon afterwards. Necropsy showed that there were many minute haemorrhages throughout the brain and a large haemorrhage in the pons. There was not any oedema of the brain and the meninges were normal.

Case 2.—The patient was restless, sleepless and anxious. The deep reflexes were diminished but present. He made a complete recovery.

Case 3.—The patient was of the stuporous type. At first he gave correct replies to questions, but he gradually sank into a very apathetic dull state and then into a light coma in which he required catheterization. He could swallow well. He had two fits of an epileptiform type on the fourth day of the illness. The pupils were dilated widely but reacted well. A right paraplegia developed together with marked neck rigidity, but Kernig's sign was absent. Mentally, he was slightly confused. He made a complete recovery in 3 weeks.

Case 4.—Marked midbrain symptoms developed. The patient was very disturbed emotionally and was moved to tears or laughter quite irrationally. He understood simple questions and obeyed simple commands. His speech was slurred but swallowing was normal. The jaw jerk was greatly exaggerated; the deep reflexes were very active and the plantar reflexes normal. The cranial nerves did not show any abnormality. He gradually made a complete recovery.

The cerebrospinal fluid showed one change only in all four cases: a very marked increase in the amount of protein and globulin. This was most marked in the fatal case (protein 360 milligrammes per 100 cubic centimetres); the cerebrospinal fluid protein returned to normal in the other cases as the patients recovered. The cerebrospinal fluid of many other patients treated by this technique was examined on the third day of treatment, and in all normal cases there was not any increase of protein and globulin. It is possible that this examination may provide the earliest or only method of detecting the onset of encephalopathy.

Treatment of acute encephalopathy.—In accordance with the earlier conceptions of the pathology of this disease, the treatment given at first was lumbar puncture, bleeding and dosage with adrenaline. On further consideration of the causation and pathology, it was advised that the condition be regarded as a primary damage to the cerebral capillaries, analogous to toxic purpura or to the vascular damage in exfoliative dermatitis. The special treatment adopted was as follows: (1) calcium gluconate by injection; (2) ascorbic acid by mouth; (3) vitamin B₁ by injection.

Diphtheria as a venereal disease

An unusual point in differential diagnosis which had to be considered was

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diphtheria of the genital organs or the skin. This could be overlooked very readily ; for example, I was quite puzzled by an eruption on the scrotum of an officer until polyneuritis developed. In another case, the nature of the genital ulcer was recognized only when the attendant was found to have diphtheritic infection of a finger. Diphtheria of the skin was relatively common in the Middle East Forces, and primary diphtheritic infection of the genital organs, too, was said to follow oral coitus. Two deaths from diphtheritic infection of the penis were recorded.

Lymphogranuloma inguinale

This disease was surprisingly infrequent, but a large contingent of dusky giants from the region of Lake Chad was found to comprise several cases of this disease. Sporadic cases occurred, especially in Indians who had just arrived from Bombay or Madras, and the disease was contracted also in Eritrea and Abyssinia. Several cases of primary infection of the rectum were diagnosed when investigated at a special clinic for diseases of the rectum.

Yaws

A fairly large contingent of East African native troops arrived in the Middle East, and they had a high rate of incidence of venereal disease, including syphilis ; the proportion of men who had a positive Kahn or Wassermann reaction was very large. None, however, had any lesions which were clinically characteristic of late yaws, although it was a commonplace to have complaints of pain in the tibia, with tenderness of the bone and slight periostitis and sometimes mild fever. The men asked for "N.A.B. injections", because they knew from previous experience that this treatment would produce rapid "cure".

In 1943 I visited East Africa on a liaison visit and, thanks to the kindness of Brigadier Cormack, I was able to visit a native village on the slopes of Mount Kenya and see a very large collection of cases of yaws of all types. A message had been sent out by the District Medical Officer before our arrival, and whilst we fished for trout in the delightful icy-cold streams, the patients came in from remote villages. They brought babies, and grandmothers too, all anxious to show their scabs and scars. This was a marvellous clinical demonstration, and the setting was perfect, with a magnificent jacaranda tree covered with pale blue flowers to shelter us from the sun, Mount Kenya in the background and the local policeman to keep the patients in order.

Syphilis in African natives

This presented many difficulties in diagnosis and, during a visit to South Africa and East Africa, I made a special study of the clinical manifestations by visiting the native hospitals. There is a marked tendency for the squamous eruption of secondary syphilis to form a dry, powdery scale, with very few signs of infiltration or of papule or pustule formation beneath. Condylomata in the anal region tend to assume giant form. A peculiar white scaly form of baldness—"white-head"—is seen occasionally and is very conspicuous on the dusky scalp.

The "non-European" hospital outside Johannesburg presented two curious spectacles. The first was a long row of large glass jars in the surgery, each packed with hundreds of pieces of skin removed at circumcision ; many thousands had been collected. The operation was performed in an incredibly short time, and without anaesthesia, on the majority of male patients. The other spectacle was the method of mercury inunction. The patients were paraded in a courtyard and formed into a large circle ; the ointment was placed on the right hand of each patient, and then for 30 minutes the men marched round the courtyard, each rubbing the ointment either into his own torso or into the back of the patient in front, chanting lustily to the accompaniment of a beating drum.

Syphilis and gonorrhoea in the African native already constitute a great problem. Some tribes are infected so heavily that they are in danger of extinction. In other areas—especially the urban districts—a very high rate of incidence of

disease prevails and the victims receive very little treatment. The patient is not highly educated ; he very often receives only symptomatic relief, then disappears. The African natives do suffer from cardiovascular syphilis and neurosyphilis, but probably not in as large a proportion as do the European races. This is a very profitable field of study for a small team of experts, and the results would certainly be of immense value to the future of the African races. The Rand goldmining industry in South Africa had treated a considerable number of natives in the mines hospitals, using intensive Mapharside treatment, and had secured good results without deaths.

"The Battle of the Berka"

The fame of Alamein is justly known to the world, but few know of the "Battle of the Berka", which was fought out in conference rooms and by the exchange of lengthy minutes and memoranda. Feeling ran high and the question was debated, not only in General Headquarters but in the select precincts of Geriza and the Turf Club by the mighty, and by the humble in the cafés and canteens. The Pyramids are certainly visited by every tourist in Egypt ; the British soldiers just as certainly visited the Wagh el Berka. For the benefit of those who have not enjoyed the hospitality of Egyptian sand, I should explain that "the Berka" is a slum of Cairo, only a few hundred yards from Shephard's Hotel, which housed 90 per cent of the licensed brothels of Cairo. I think that there were between 400 and 600 licensed prostitutes in this area, and the Provost-Marshal estimated that over 90,000 men per month visited the area for purposes of sexual intercourse. The women were inspected twice weekly by Egyptian doctors, but they knew the day and hour of examination and duly prepared themselves by the use of powerful antiseptics and astringents. The medical inspection averaged thirty seconds per woman—the dexterity of the examiners was incredible—and bacteriological tests were not used except in the case of obvious infection. The great majority of the women had positive serological reactions to tests for syphilis, but were allowed to continue "in practice" if they had received the equivalent of a single-unit course of neoarsphenamine and bismuth.

At first it was considered to be impossible to keep the troops away from the area. There were about 36 possible entrances to the area, and in the blackout—even an Egyptian blackout—the task of police patrols was very difficult.

I obtained from all specialists data on the alleged source of infection of every case of venereal disease admitted to hospital, and found that well over 90 per cent were infected in tolerated brothels, mostly in Cairo and Alexandria. The police view was that the women in tolerated brothels were "clean" and that the street-walking prostitutes were the principal source of disease. It was quite true that over 70 per cent of street-walkers and clandestine prostitutes were found to be infected, but these women each infected a relatively small number of men each day, whereas those in the recognized houses had a huge clientele.

In the Canal area, where Suez, Ismalia and Port Said were hot-beds of vice, the brothels were situated in filthy slums in the native districts, in which plague and other contagious diseases were prevalent. A strong-willed military commander issued orders that all the native areas, including the brothels, were to be placed out of bounds. Within two weeks a marked reduction in the venereal diseases rate was seen, and a similar reduction in petty crime was also effected. In Cairo, after much debate, the medical recommendation was accepted, and the policy was adopted in August 1942 that all brothels would be out of bounds. Alexandria was excepted at the urgent request of the non-medical representatives of the Royal Navy.

In Cairo this order was enforced—at first very laxly but later very effectively—and the venereal diseases rate fell gradually and almost continuously until within 3-6 months the incidence was almost halved. In other areas the order was enforced either indifferently or strictly, according to the strength of conviction of the commander and the efficiency of the police force. In Palestine it was very difficult to enforce the order and in Haifa and Tel Aviv brothels flourished and troops

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flocked to them. In Cyprus there was a minimal attempt to adhere to the policy ; but what could be expected in a land where half-a-crown bought a bottle of brandy, a woman and gonorrhoea ? In Greece it was almost impossible to enforce this policy, because the Government sponsored the brothel system.

Certainly it was proved to my satisfaction and to that of most medical observers that the policy of closure of all tolerated brothels did cause a great reduction in venereal disease.

Other methods of prevention

It was found that almost all the officers and men arriving in the Middle East Theatre were almost completely ignorant of the practised methods of prevention of venereal disease. Their education in this respect, as in other matters of tropical hygiene, was sadly deficient. It was a slow, tedious and difficult process to convince combatant officers that flies and whores could reduce manpower and efficiency much more greatly than could the missiles of the enemy. By means of lectures (especially at the large base depots), of publications, of posters and of the efforts of medical officers, also by painful experience, this huge force became trained in health preservation. Prophylactic centres were established in all the big cities, and abundant supplies of prophylactic appliances were made available. A supply of 5,000,000 condoms captured from the Italians at Asmara was extremely valuable ; it bridged the gap until home authorities could be persuaded to provide these as a medical supply.

The troops required very little persuasion to use the prophylactic centres, provided that these were centrally placed and were well equipped and staffed. Huge numbers were treated and, although the technique was often far from perfect, very few soldiers contracted syphilis or gonorrhoea if they had used the centre within two hours of coitus. It was difficult, or even impossible, to educate certain classes among the troops in the use of prophylactic facilities ; this statement applies to Greeks, Cypriots, French coloured troops, and South African non-Europeans ; most of these men were habitually promiscuous when opportunity offered. They had a correspondingly high venereal diseases rate.

The Eighth Army, whilst in the desert, had very little venereal disease, but new problems arose when they took over from the beaten Germans and Italians large towns such as Benghazi and Tripoli. In the former there were very few women left, and some wise policeman placed them all in protective custody in the local "lock-up" and then had them deported to an area remote from our troops. In Tripoli this action could not be taken and, after a brief period of chaos, the brothel area was placed out of bounds and the troops were rigidly excluded. The soldiers of the Eighth Army whilst in the Middle East had a very low venereal diseases rate. They had a mobile venereal diseases treatment centre and prophylactic centres, and these moved forward quickly to occupied areas.

THE CENTRAL MEDITERRANEAN FORCES: NORTH AFRICA, SICILY AND ITALY

In December 1943, in view of the very large incidence of venereal disease in Sicily and Southern Italy and of the urgent demand for venereal diseases specialists, orderlies and equipment, I paid a rapid liaison visit to Algiers, and visited Naples with Lieutenant-Colonel Campbell and Colonel Young. I was appalled by what I found. Almost no planning or provision for the prevention or treatment of venereal disease had been done. The hospitals were swamped with huge numbers of cases. In consequence of indifferent treatment methods and of a high rate of incidence of sulphamide-resistant strains of gonococcus, the soldiers were almost incurable by the methods and facilities then available.

In March 1944, much to my dismay and disgust, I was appointed to the Central Mediterranean Forces as Consultant Venereologist. Facilities to work efficiently were almost totally lacking. I had a small table in an office shared by six other officers. Transport was almost non-existent. Specialists, equipment, medicaments

and hospital accommodation were unobtainable, and the administrative tangle between Algiers and Naples made rapid or efficient action almost impossible. At first my efforts were concentrated on visiting hospitals to advise on the treatment of chronic and resistant cases. But what could be done when—as in Algiers, for example—one specialist, with two half-trained assistants, had 600 cases and had to work in tents in a sea of mud, and when all operative and instrumental work was done by the light of a hurricane lamp? In Naples I found that the venereal diseases expansion of No. 65 General Hospital—under the charge of Major Bell and equipped for 100 patients—had 380 patients, and that at one time there had been 550 patients.

Sicily and Italy, 1944-1945

In Sicily and Italy a large number of troops, inexperienced in foreign service and virtually without training in the prevention of disease, made contact with a population which had a high rate of incidence of venereal diseases and a low moral standard, which was suffering from semi-starvation, and which had completely inefficient police, medical and other local services. The population was demoralized, apathetic and disorganized; the people suffered from political confusion and lived in squalor, cold and filth. These people were only too ready to make a profit out of their victors, and the troops were accosted and seduced with effrontery and persistence. Women sold themselves and their daughters for a paltry sum or a little food; old men, young men and boys thronged the streets pimping for their female relatives. It was impossible to walk down the Via Roma in Naples without being accosted directly many times, or being invited by some dirty urchin to come home and eat spaghetti and "see pretty sister". Wine was plentiful, cheap, potent and stupefying, and very frequently synthetic "hooch" was peddled to the unsuspecting "innocents abroad", who recovered next day with a headache and empty pockets, and incubating venereal infection. Such was the picture in the spring of 1944. An epidemic of typhus in the civil population of Naples probably saved the situation, for the military authorities placed the town out of bounds to troops, and there was a brief opportunity in which to attempt to stem the flood of venereal infections. The civil hospitals for venereal diseases in prostitutes were packed—the Pace hospital in Naples had over 400 patients—and the prisons were full of women arrested for illegal prostitution. It was difficult to provide counter-attractions for the troops, for the main buildings were badly damaged; there was very limited electricity and almost no entertainment except *vino* and *venery*.

One of the first steps was to organize more efficient treatment methods. A system consisting of two days' treatment with sulphapyridine (about 4 grammes daily) had been sponsored officially; but if it ever succeeded elsewhere, it certainly did not cure the Italian type of gonorrhoea. I consider that it cured few patients and rendered the majority of cases chronic and sulphonamide-resistant.

There is no doubt that in Italy we encountered for the first time a large proportion of cases infected with sulphonamide-resistant strains of gonococcus. There were many people who argued that this large proportion of sulpha-resistance was due to the habit of the women, especially prostitutes, of taking small doses of these medicaments to counteract infection. I was never able to find any evidence to support this theory. I am in favour of an alternative theory, namely that Italian doctors were so inefficient and careless that they had given subcurative treatment to their patients; by so doing they had caused the disappearance of symptoms, but had created in the population a host of sulpha-resistant gonococcus carriers.

It was not possible to conduct a proper scientific investigation of the percentage and degree of sulphonamide-resistance of strains of gonococci. When selected groups of previously untreated patients, however, were given high-dosage schedules of sulphathiazole (for example 6 grammes daily for 10 days) it was found that over 30 per cent remained uncured by such treatment. A slightly larger proportion were cured if the sulphonamides were reinforced by fever and shock therapy, induced by a series of T.A.B. injections.

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Treatment in forward areas.—A forward treatment centre for venereal diseases was organized a short distance behind the battle concentration area, and No. 12 Casualty Clearing Station was organized and used exclusively for over 6 months for the treatment of venereal diseases. It did very good work, and the Commanding Officer (Lieutenant-Colonel Allen) and staff accepted its new role with good grace and worked hard to achieve success, recognizing that it returned to the battle very speedily a large number of fit and fully-trained soldiers. This Casualty Clearing Station had 200 beds and provided a very rapid turnover of patients. Furthermore, it provided for out-patients tests of cure, a diagnostic service and routine treatment. It had a busy but happy life, and I have very pleasant recollections of the days spent under canvas with Colonel Allen and the officers of his mess. The principles which we adopted in this unit were that diagnosis and treatment had to be rapid. If the patient could not be returned to duty within 14 days he was evacuated to a base hospital. I estimate that this unit prevented the evacuation to the base of about 500 men each month.

Penicillin treatment in base areas.—The situation was far from satisfactory at the Base, where about 3,000 chronic cases had accumulated in hospitals. It was suggested seriously that 1,000 of these patients should be sent home for special treatment, also to enable the hospitals to cope with the remainder. Reinforcements of specialists and orderlies arrived, and although for a time they were officially "lost" in a reinforcement camp, they were soon at work. At this stage penicillin became available and a fascinating period of work ensued: visiting hospitals, selecting cases, observing results and endeavouring to obtain penicillin and distribute the substance fairly and to the greatest advantage to the largest number. The results seemed to us to be miraculous. The most difficult and resistant cases were selected, and men who were of value to the war effort were given priority. The first amount secured—40 mega units (40,000,000 Oxford units)—was more valuable than gold; it was given by the United States Army Medical Services on a lease-lend basis. Very soon ample supplies were available, and in a few months every patient with gonorrhoea was given penicillin as soon as the case was diagnosed. A very rapid system of treatment was organized, especially in the forward treatment centres, and the patient was seldom away from duty for more than 24 hours. This service was organized also for the Royal Navy and the Royal Air Force and for Allied Forces operating under British administration.

Treatment of syphilis with penicillin was commenced in the autumn of 1944, and in the last quarter of that year approximately 1,000 cases were treated with a dosage of 2,000,000 Oxford units, divided into 100 doses of 20,000 units. The preliminary survey of this group, when analysed in February 1945, just before my departure, indicated that the results were moderately satisfactory, about 90 per cent of cases showing clinical cure and negative serological findings. The ultimate fate of this group will be of considerable interest—if the Central Syphilis Register can ever trace even a quarter of the number!

As the victorious armies swept forward, we had the same problems to face in Rome, Florence and many other towns. The country was beautiful and life became better organized. Air travel could be organized with ease and a motor-car obtained occasionally, with only a 50 per cent probability of mechanical breakdown on every tour.

Greece revisited

In January 1941 I visited Greece, in order to organize treatment of venereal diseases, and found that the small force then in Greece had a very large incidence of these diseases. Troops who had served a long time in the desert were fêted and received with open arms by the population. The Greeks were making a magnificent defence against the Italians, although hampered by shortage of equipment of all sorts, but there was a background of fear, for the German Embassy was still in Athens, flying the Swastika, at the same time as British Forces were pouring into the Piraeus.

In 1944 I revisited Greece. Some of my friends I could not find ; the others were prematurely aged and looked ill. A distinguished medical professor limped badly from a knee injury incurred when a Nazi soldier kicked him off a moving tram. Venereal disease was extremely prevalent. The Germans had kept open the venereal diseases hospital (under the care of Professor Photinos), but they would permit the use of medicaments and food only for the treatment of these diseases in young women. Outside the cities no treatment of venereal diseases had been given. In the cities syphilis had increased at least five-fold and it was difficult to compute the increased incidence of gonorrhoea and chancroid. I do not know whether or not the Germans suffered to the same extent from venereal diseases as did our troops—it was difficult to obtain reliable data on this subject—but the German *régime* certainly fostered conditions which produced a high incidence. Professor Photinos had collected a very fine set of wax casts and models of skin and venereal cases, some of them very unusual, and a very profitable hour could be spent in his museum.

Conclusions

Looking back on the war years after a short interval, certain strong impressions remain.

(1) Venerologists abroad had a tremendous volume and variety of experience, the value of which can scarcely be measured.

(2) Contact with other peoples, with different standards and codes, different medical views and practices, was very stimulating.

(3) Our policy regarding venereal diseases was evolved gradually, on the spot, by trial and error and after much delay. It would have been extremely valuable if the War Office—and not the medical branch—had set out clearly the principles of prevention of venereal disease. For example, a bold directive was required on the exclusion of troops from brothels and on the provision of prophylactic centres, as well as a strongly formed public opinion on the subject of prevention. Army discipline regarding venereal diseases could have been made a very powerful factor in safeguarding health and efficiency.

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VENEREAL DISEASES IN THE ARMED FORCES OVERSEAS (2)*

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Reminiscences of experiences in wartime are apt to be incorrect, perhaps boring, and often best left untold. To attempt a comprehensive review of venereal diseases overseas would take up far too much space, so I shall content myself with describing briefly some recollections of my sojourns in North Africa, Sicily and South Italy, and later on of the advance from Normandy to Germany, from 1943 to 1946.

Much has been written already of the progress of venereal diseases during the war, of the inevitable high rate of incidence and especially of the treatment in the armed Forces, and in view of all this I shall give you very few statistics. One major slogan of the war was "conservation of manpower". No greater avoidable wastage of manpower than that due to venereal diseases existed, and the manner in which venereologists were able to combat this wastage will never receive the recognition which it deserves. The reduction in time to effect cures makes un-

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